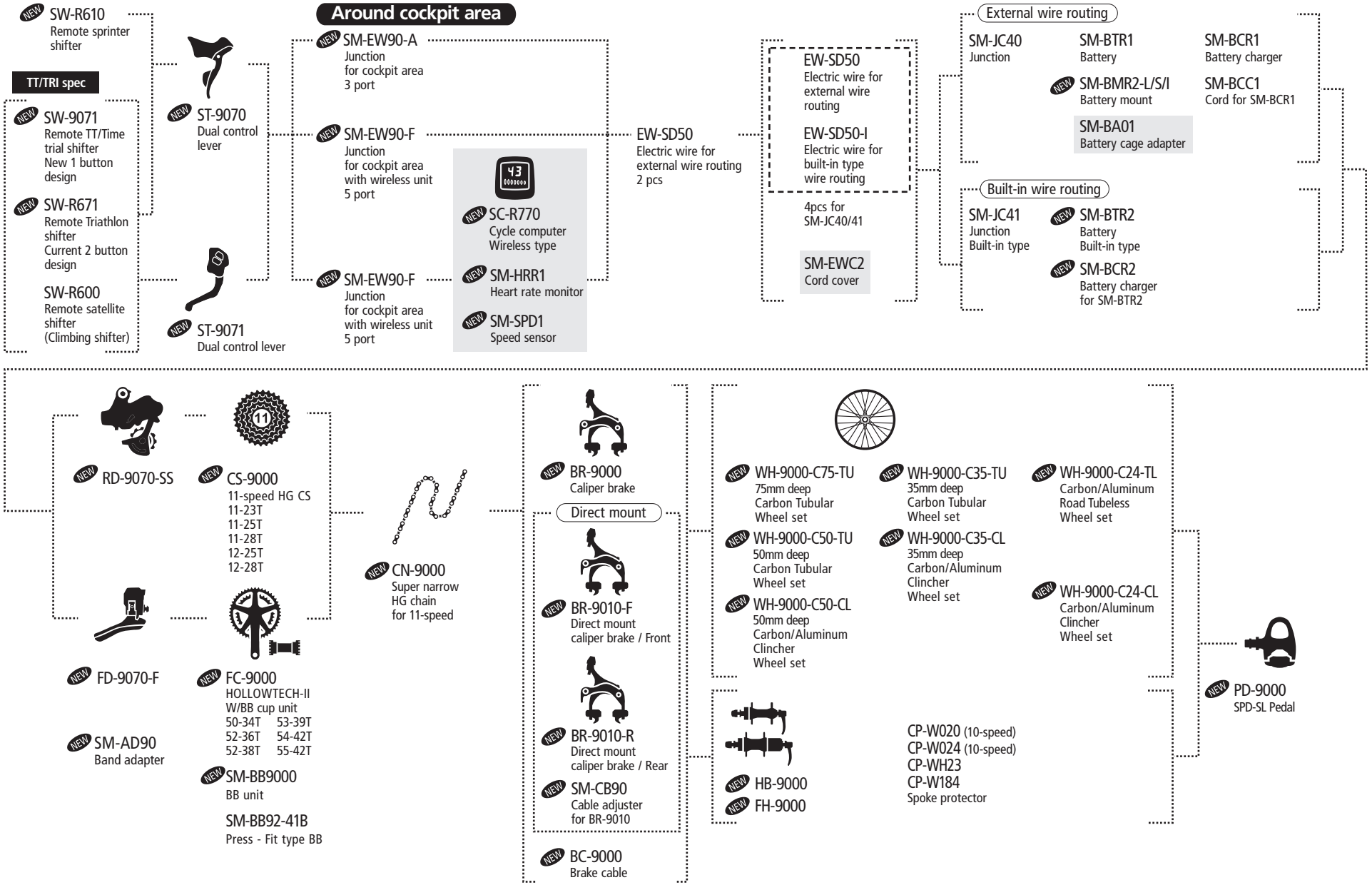
# DURA-ACE 9070 series

(2×11-speed)

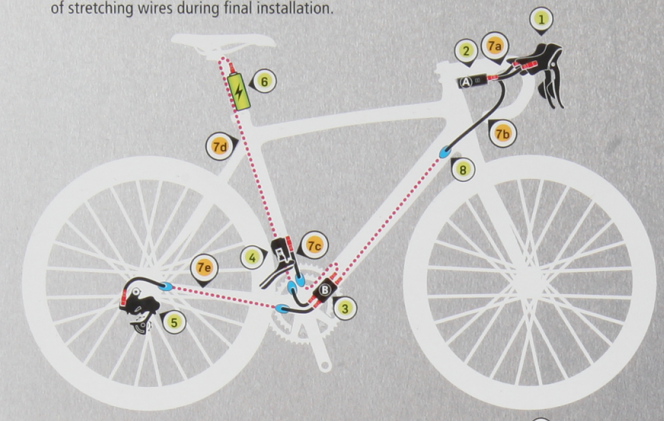


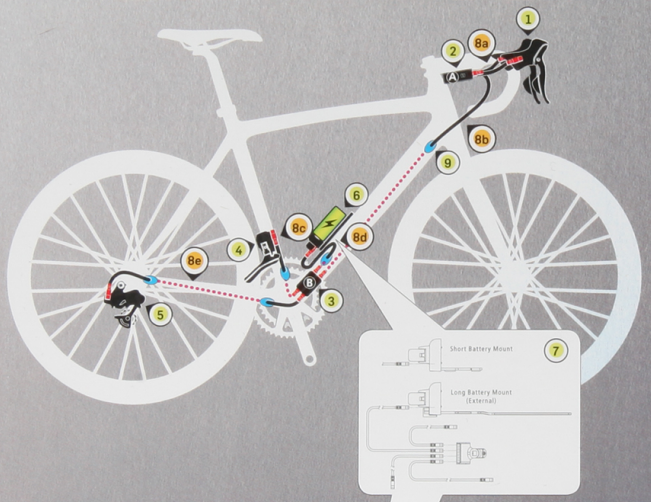

All information on this page as of Apr. 27th 2012.

Version 1.4

# DURA-ACE 9070 DI2 SERIES WIRING OPTIONS

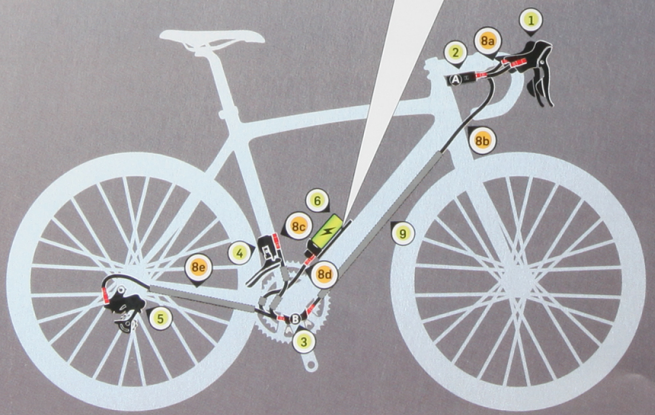
EW-ED50 E-Tube wires allow unlimited internal or external wiring options. Determine wire lengths needed and to be safe, use the next length up to eliminate the possibility of stretching wires during final installation.










## INTERNAL WIRING

### BUILT-IN BATTERY MOUNT TYPE

DETERMINE WIRE LENGTHS BY TAKING THE FOLLOWING MEASUREMENTS:
7a: Junction-A to Shifters
7b: Juntion-A to Junction-B location
7c: Junction-B to Front Derailleur
7d: Junction-B to Battery location
7e: Junction-B to Rear Derailleur

| | PART | DESCRIPTION | |
|---|---|---|---|
| 1 | ST-9070 | SHIFT LEVERS (ROAD OR TT/TRI) | |
| 2 | SM-EW90 | JUNCTION-A (3-PORT OR 5-PORT) | |
| 3 | SM-JC41 | INTERNAL JUNCTION-B | |
| 4 | FD-9070 | FRONT DERAILLEUR | |
| 5 | RD-9070 | REAR DERAILLEUR | |
| 6 | SM-BTR2 | INTERNAL BATTERY | |
| 7a | EW-ED50 | E-TUBE WIRE | JUNC-A TO ST (2X) |
| 7b | EW-ED50 | E-TUBE WIRE | JUNC-A TO JUNC-B |
| 7c | EW-ED50 | E-TUBE WIRE | JUNC-B TO FD |
| 7d | EW-ED50 | E-TUBE WIRE | JUNC-B TO BT |
| 7e | EW-ED50 | E-TUBE WIRE | JUNC-B TO RD |
| 8 | SM-GM01/2 | FRAME GROMMET (5X) | |

## INTERNAL WIRING

### EXTERNAL BATTERY MOUNT TYPE

DETERMINE WIRE LENGTHS BY TAKING THE FOLLOWING MEASUREMENTS:
8a: Junction-A to Shifters
8b: Juntion-A to Junction-B location
8c: Junction-B to Front Derailleur
8d: Junction-B to Battery location
8e: Junction-B to Rear Derailleur

| | PART | DESCRIPTION | |
|---|---|---|---|
| 1 | ST-9070 | SHIFT LEVERS (ROAD OR TT/TRI) | |
| 2 | SM-EW90 | JUNCTION-A (3-PORT OR 5-PORT) | |
| 3 | SM-JC41 | INTERNAL JUNCTION-B | |
| 4 | FD-9070 | FRONT DERAILLEUR | |
| 5 | RD-9070 | REAR DERAILLEUR | |
| 6 | SM-BTR1 | EXTERNAL BATTERY | |
| 7 | SM-BM01 | BATTERY MOUNT | |
| 8a | EW-ED50 | E-TUBE WIRE | JUNC-A TO ST (2X) |
| 8b | EW-ED50 | E-TUBE WIRE | JUNC-A TO JUNC-B |
| 8c | EW-ED50 | E-TUBE WIRE | JUNC-B TO FD |
| 8d | EW-ED50 | E-TUBE WIRE | JUNC-B TO BT |
| 8e | EW-ED50 | E-TUBE WIRE | JUNC-B TO RD |
| 9 | SM-GM01/2 | FRAME GROMMET (5X) | |

## EXTERNAL WIRING

DETERMINE WIRE LENGTHS BY TAKING THE FOLLOWING MEASUREMENTS:
8a: Junction-A to Shifters
8b: Juntion-A to Junction-B location
8c: Junction-B to Front Derailleur
8d: Junction-B to Battery location
8e: Junction-B to Rear Derailleur

| | PART | DESCRIPTION | |
|---|---|---|---|
| 1 | ST-9070 | SHIFT LEVERS (ROAD OR TT/TRI) | |
| 2 | SM-EW90 | JUNCTION-A (3-PORT OR 5-PORT) | |
| 3 | SM-JC40 | EXTERNAL JUNCTION-B | |
| 4 | FD-9070 | FRONT DERAILLEUR | |
| 5 | RD-9070 | REAR DERAILLEUR | |
| 6 | SM-BTR1 | EXTERNAL BATTERY | |
| 7 | SM-BM01 | SHORT OR LONG BATTERY MOUNT | |
| 8a | EW-ED50 | E-TUBE WIRE | JUNC-A TO ST (2X) |
| 8b | EW-ED50 | E-TUBE WIRE | JUNC-A TO JUNC-B |
| 8c | EW-ED50 | E-TUBE WIRE | JUNC-B TO FD |
| 8d | EW-ED50 | E-TUBE WIRE | JUNC-B TO BT |
| 8e | EW-ED50 | E-TUBE WIRE | JUNC-B TO RD |
| 9 | SM-EWC2 | WIRE COVERS | |

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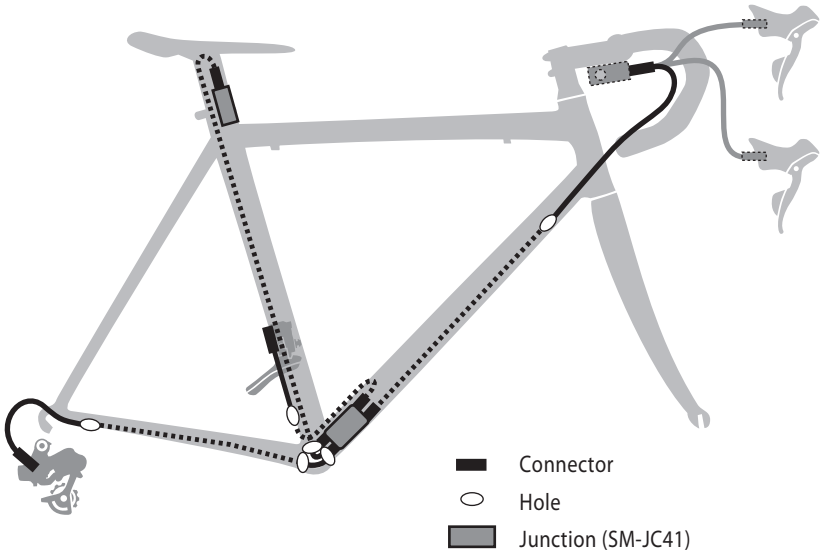
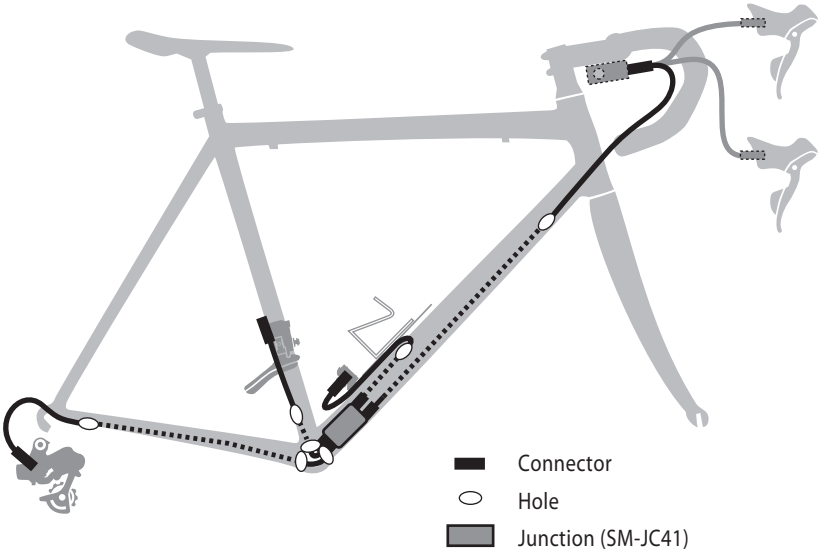
# Electric wire routing

< DURA-ACE 9070 series >

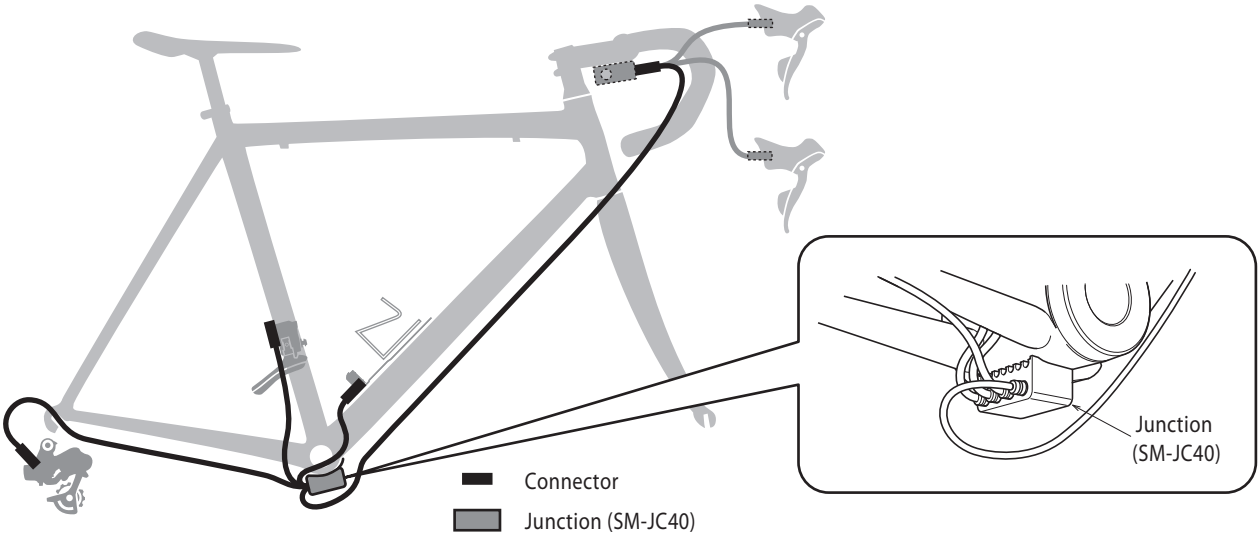
Built-in battery mount type (Internal wire routing)




External battery mount type (Internal wire routing)




External battery mount type (External wire routing)

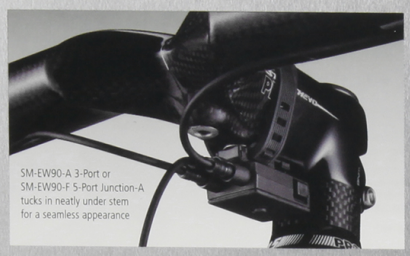



All information on this page as of Apr. 27th 2012.

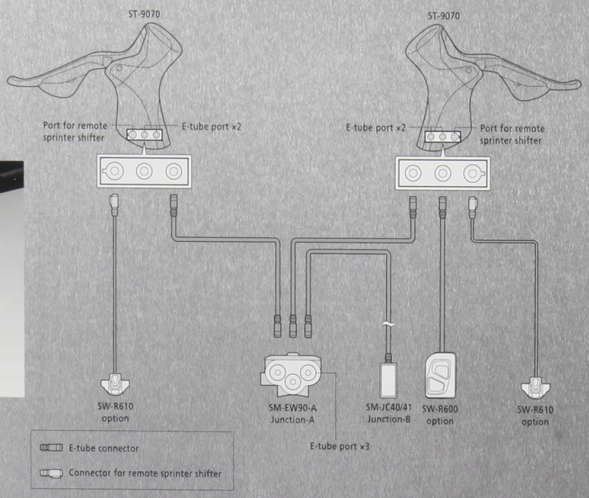
# DURA-ACE 9070 COCKPIT WIRING OPTIONS

## DROP HANDLEBAR - 3-PORT JUNCTION-A

DURA-ACE 9070 cockpit area is customizable based on how many shifting switches are required. The basic drop handlebar set-up uses the SM-EW90-A 3-Port Junction-A and allows the use of SW-R610 sprinter switches - or - SW-R600 climber shifter.

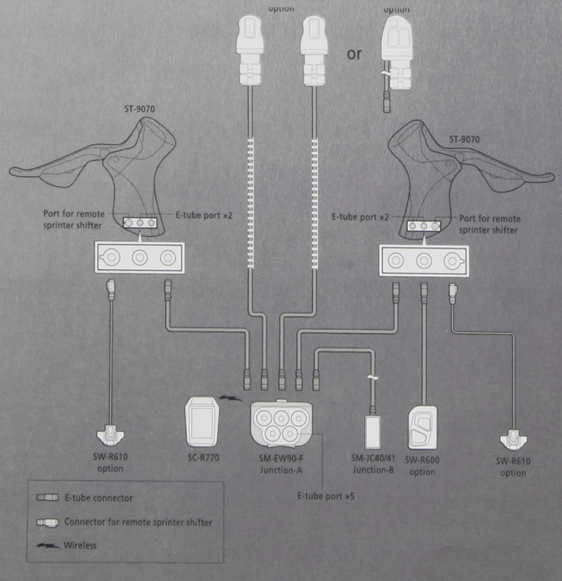


SM-EW90-A 3-Port or SM-EW90-F 5-Port Junction-A tucks in neatly under stem for a seamless appearance



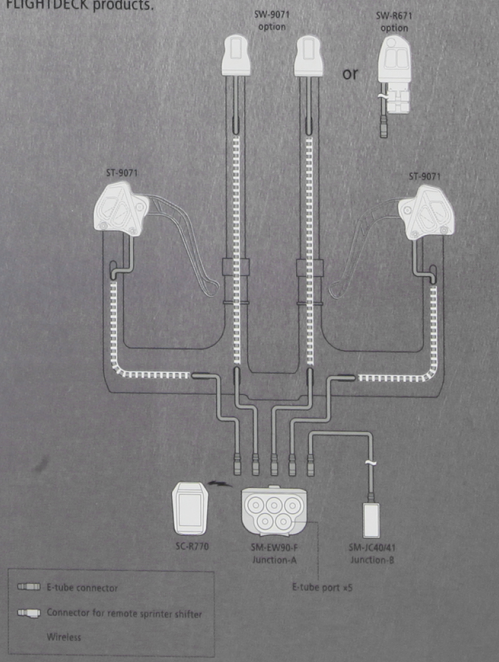

## DROP HANDLEBAR - 5-PORT JUNCTION-A (WIRELESS)

For the use of multiple shifter switches, the SM-EW90-F 5-Port Junction-A is required. This configuration also allows wireless connectivity to future FLIGHTDECK products.




## TT/TRI - 5-PORT JUNCTION-A (WIRELESS)

For TT/Triathlon, the SM-EW90-F 5-Port Junction-A is required to connect either SW-9071 single button switch, SW-R671 double button switch, or both. This configuration also allows wireless connectivity to future FLIGHTDECK products.



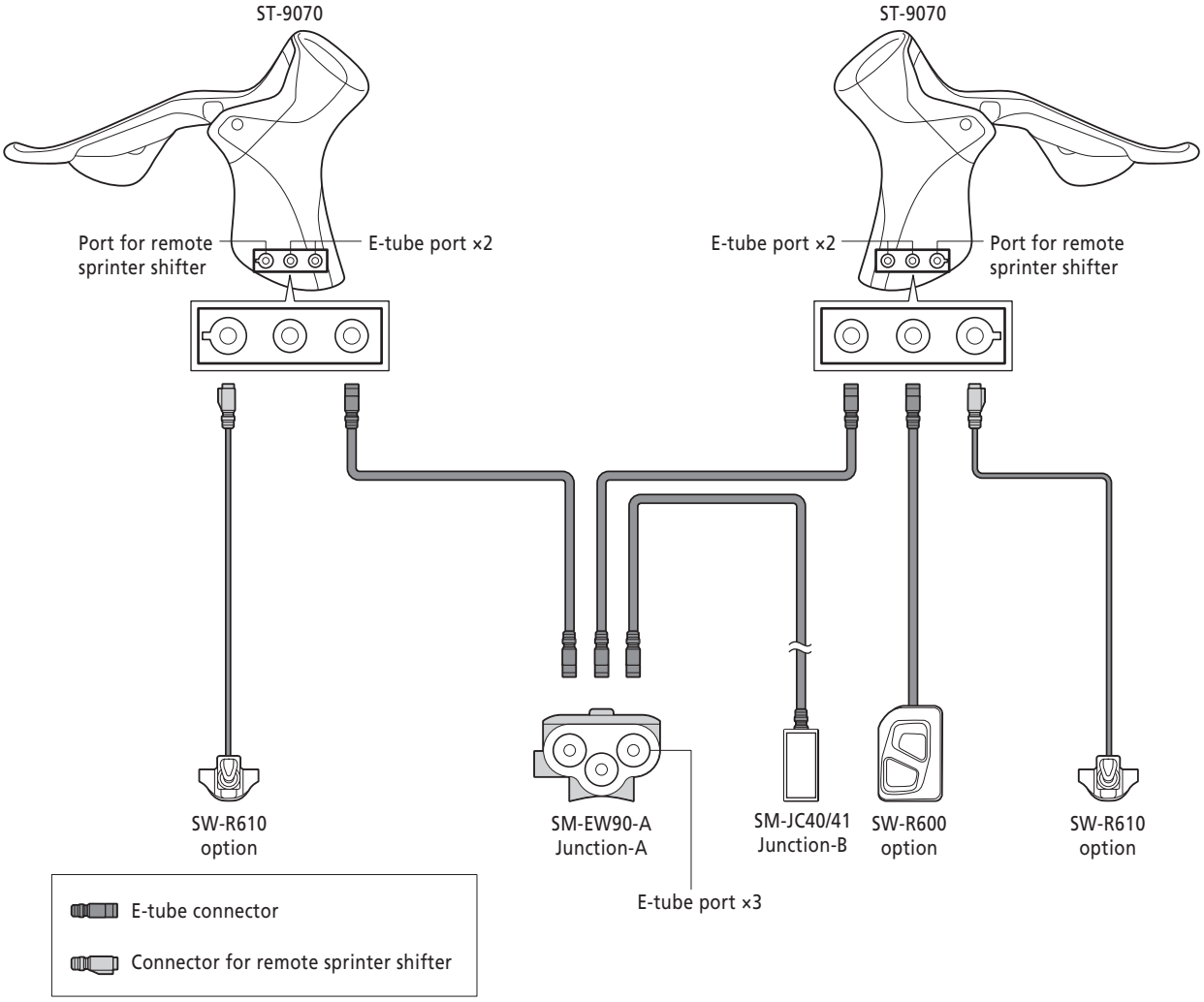



IMG_0171.psd

# Electric wire routing around cockpit area

## 1. Drop handle type

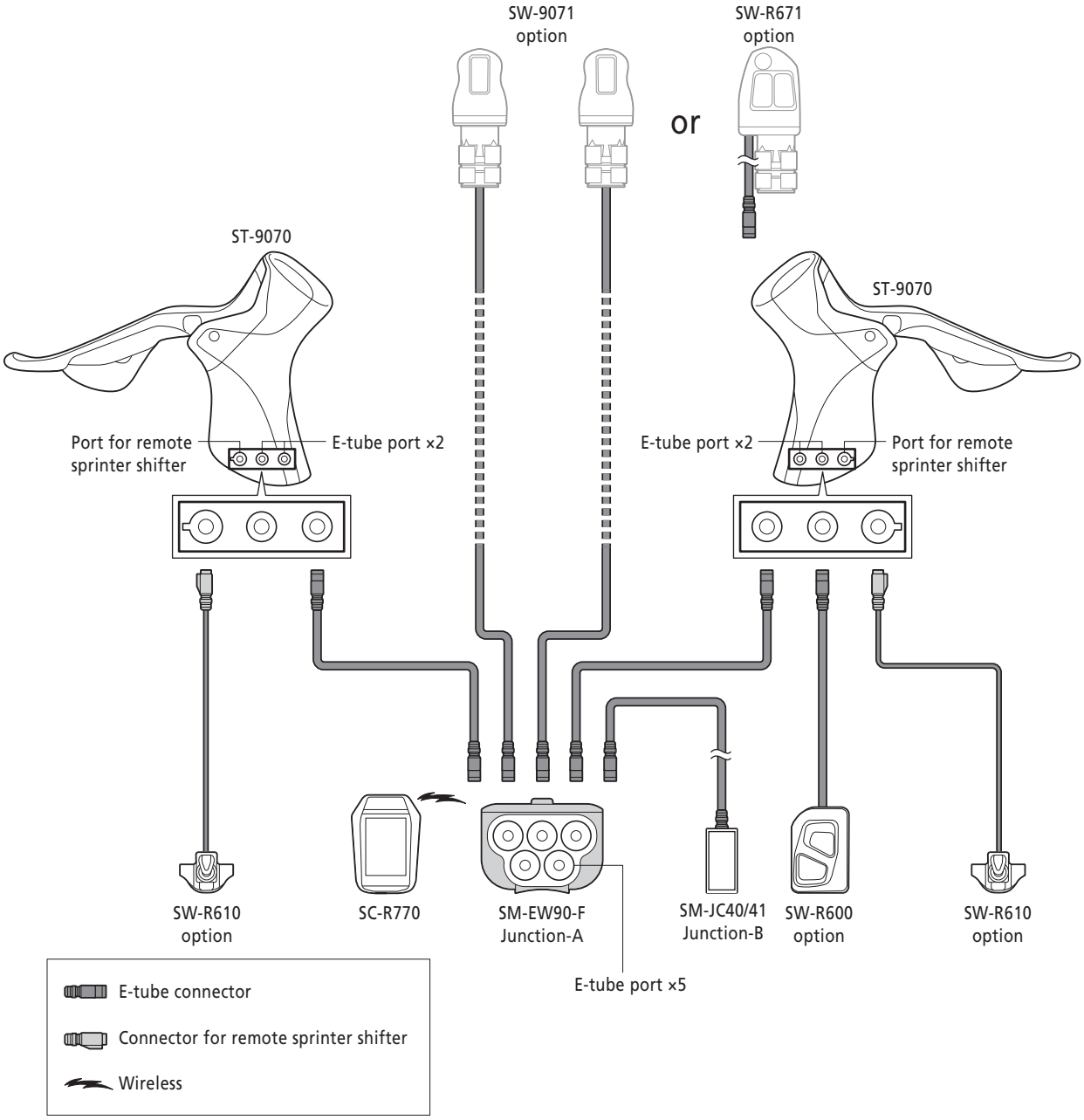
### 1-1. 3 port type





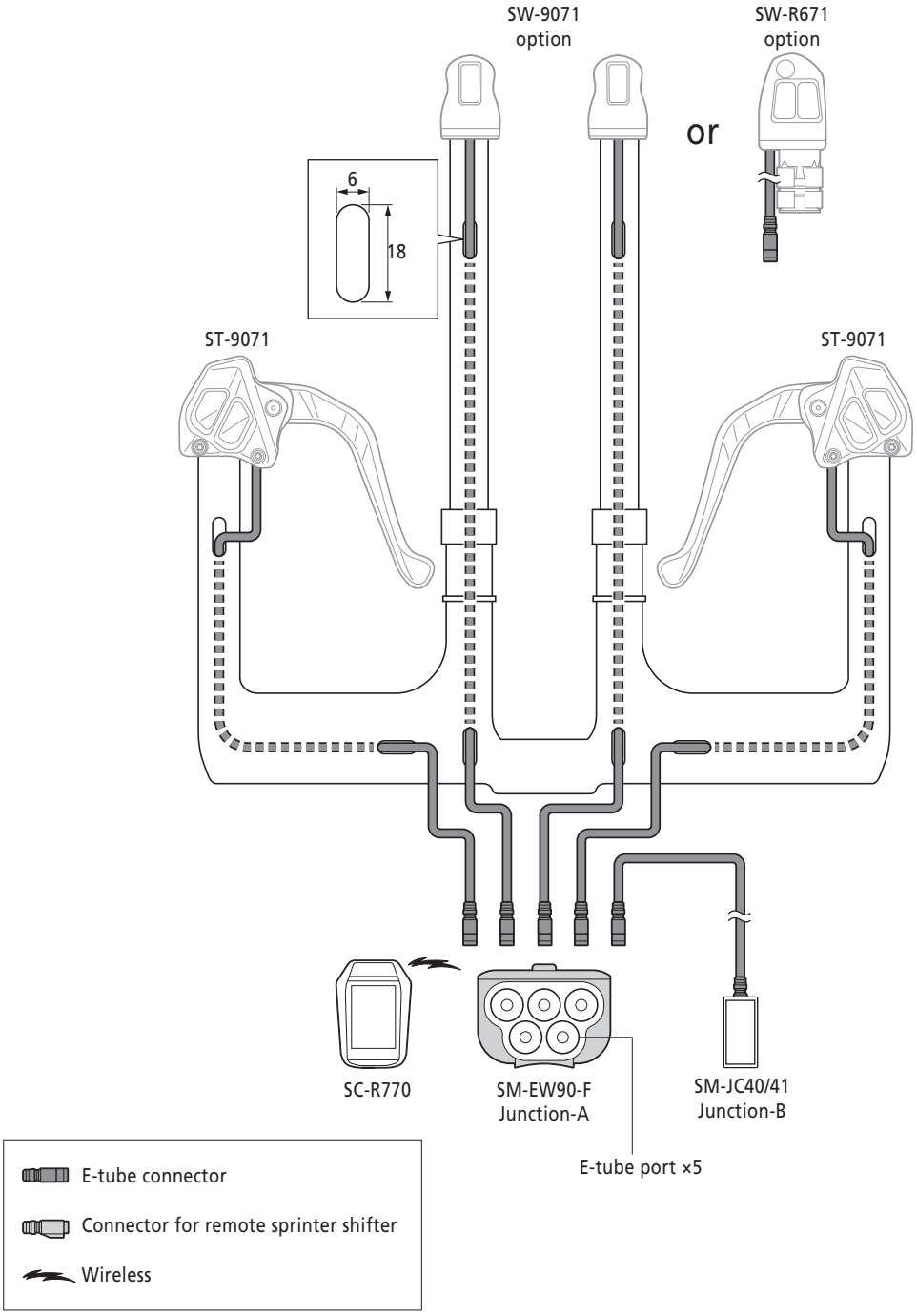

All information on this page as of Apr. 27th 2012.

## 1-2. 5 port with wireless unit type



# 2. TT / Triathlon handle type

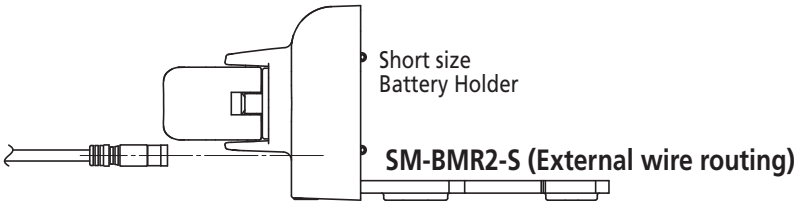
## 2-1. 5 port with wireless unit type

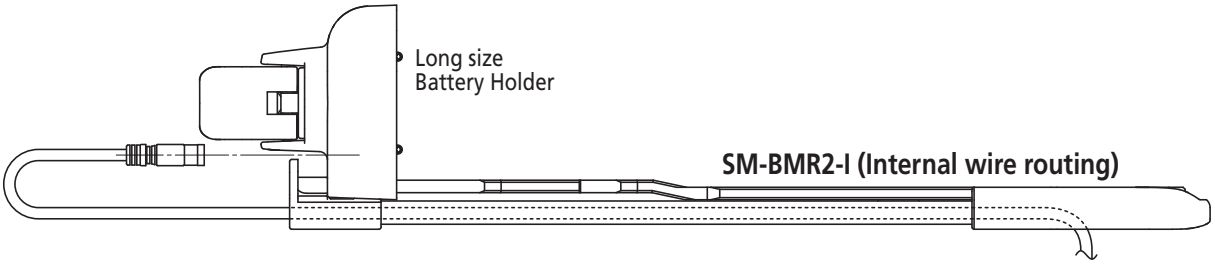


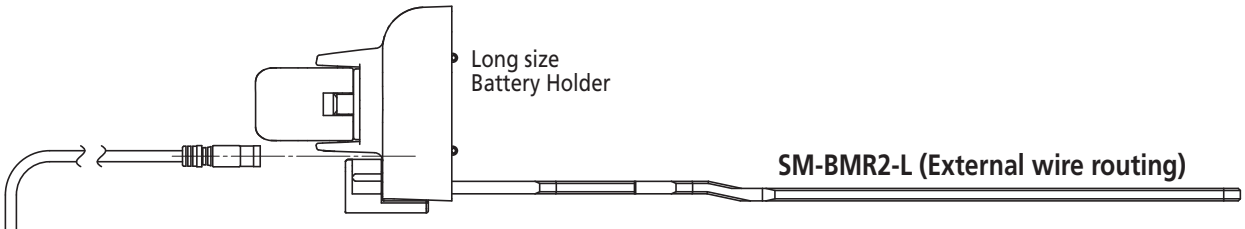


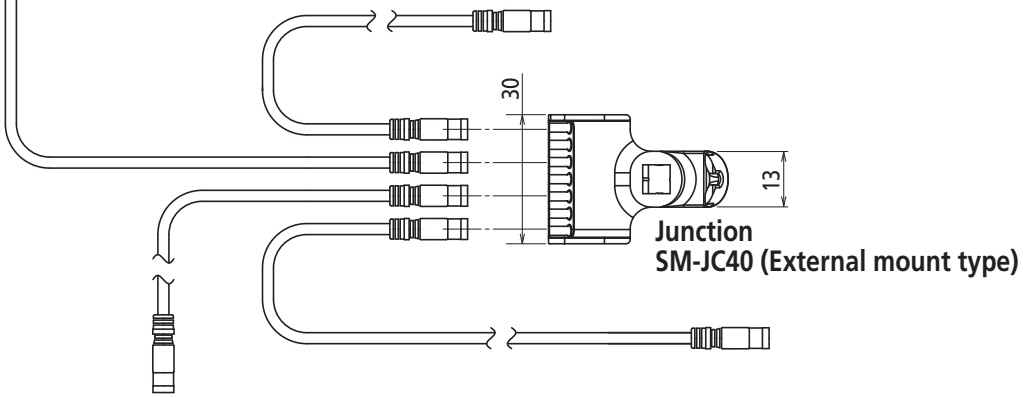

All information on this page as of Apr. 27th 2012.

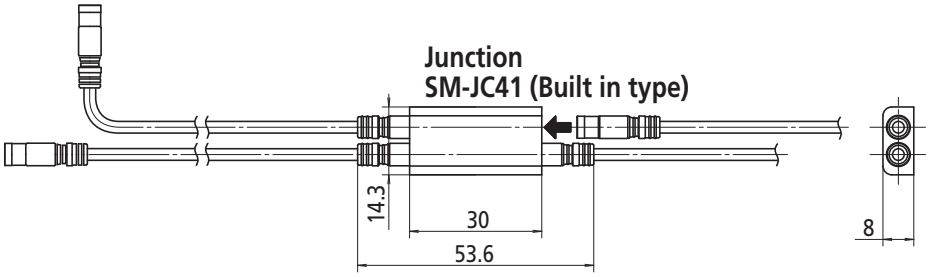
# 2. Battery holder and junction



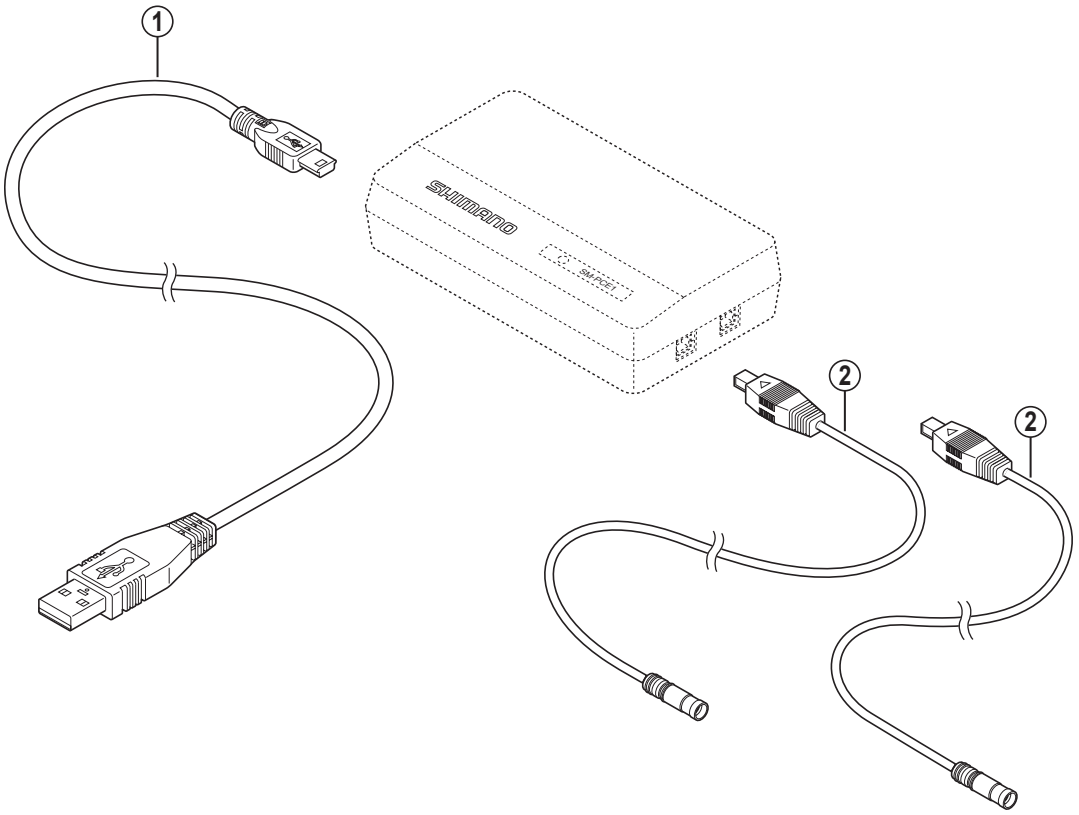



PC Linkage

# SM-PCE1




| ITEM NO. | SHIMANO CODE NO. | DESCRIPTION |
|---|---|---|
| 1 | **Y7EA02000** | USB Cable |
| 2 | **Y7EA03000** | PC Link Cable |

*Feb.-2011-3138*

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SHIMANO

SI-7EA0A-002-00

Technical Service Instructions SI-7EA0A-002

# SM-PCE1

## NOTE

- Do not use outdoors or in environments with high humidity.
- Do not place the SM-PCE1 on dusty floors when using it.
- Place the SM-PCE1 on a stable surface such as a table when using it.
- Do not place any objects on top of the SM-PCE1 or its cables.
- Do not wrap the cables into bundles.
- Do not hold the SM-PCE1 by the cables when carrying it.
- Do not apply excessive tension to the cables.
- Do not use any USB cable other than the USB cable which is supplied with the SM-PCE1.
- Connect the SM-PCE1 directly to a computer, without using an intermediate device such as a USB hub.
- Do not ride the bicycle while the SM-PCE1 and cable are still connected to it.
- Do not connect two or more of the same units to the same connection point. If this is not done, the units may not operate correctly.
- Do not connect or disconnect units again while unit recognition is in progress or after recognition is complete. If this is not done, the units may not operate correctly.
  Check the procedures which are given in the user's manual for the PC application when connecting and disconnecting units.
- After connecting the battery and launching the PC application, be sure to disconnect the SM-PCE1 from the bicycle and then disconnect and reconnect the battery. If this is not done, the system may not operate correctly.
- The tightness of the PC link cable will tend to drop after repeated connections and disconnections. If this happens, replace the cable.
- Do not wash the SM-PCE1 or wipe it using detergents.
- Do not connect two or more SM-PCE1 units to the same PC at the same time. If two or more SM-PCE1 units are connected, they will not operate correctly. In addition, operating errors may occur at the PC and it may require the PC to be restarted.

## Specifications

| | |
|---|---|
| Operating temperature | 0 °C -- 40 °C |
| Storage temperature | – 20 °C -- 70 °C |
| Operating/ storage humidity | 10 -- 95 % RH/ 10 -- 95 % RH |
| Rated voltage | 5 V ± 5 % |
| Rated power | 2.5 W |
| Interface | USB 2.0 (Full Speed) |
| Port type | At PC: A type |
| | At SM-PCE1: Mini B type |
| Dimensions | 96.4 x 53.4 x 22 mm |
| Weight | 80 g |
| LED | During normal operation: Illuminated<br>During charging: Flashing |

■ Accessories: * PC link cable (x 2) 2 m
* USB cable (x 1) 50 cm

## Compatible PCs

| | |
|---|---|
| Operating system | Windows XP 32bit/64bit (SP2 or higher)<br>Windows Vista 32bit/64bit<br>Windows 7 32bit/64bit |
| Required components | .NET Framework 3.5 |
| Other hardware | USB 1.1/2.0<br>Active Internet connection<br>Display resolution:<br>XGA (1024 x 768 dots) or higher |

(as of 1 November 2010)

## Features

The SM-PCE1 can be used to connect a PC to the bicycle (system or unit), and a PC application (such as Shimano STEPS Manager) can be used to carry out tasks such as problem diagnosis of single units and the whole system, updating firmware*, and retrieving logs. For details on operating the PC, refer to the manual for the PC application.

* Firmware: the software inside each unit

## Flow of operation when using the SM-PCE1 for the first time

After purchasing the SM-PCE1, follow this procedure to prepare the SM-PCE1 for use.

1. Download the PC application from the website.
2. Install the PC application.
3. Connect the SM-PCE1 to the PC.
4. Install the USB driver.
   - For details, refer to the manual for the PC application.
   - The method for displaying the manual for Shimano STEPS Manager is given in “Displaying the manual for Shimano STEPS Manager”.
5. Connect the SM-PCE1 to the system or to a unit.

This completes the preparation for using the SM-PCE1.

* These Service Instructions describe the procedure using Shimano STEPS Manager as an example.
* Shimano STEPS Manager is one type of PC application.

## 1. Downloading the PC application

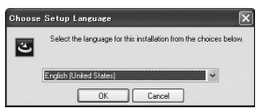
The PC application can be obtained by downloading it from http://media.shimano.com. You will need the following user ID and password at this time.

- **User ID: shimano** - **Password: 2s8m8n3**

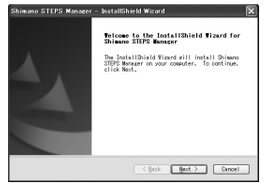
## 2. Installing the PC application

After downloading the PC application, run the Installer to install it to the PC by the following procedure. (The screenshots below show examples of installing Shimano STEPS Manager to a PC which is running Windows XP.)

1. Run the Installer. Select the language in the window which appears, and then click [OK].

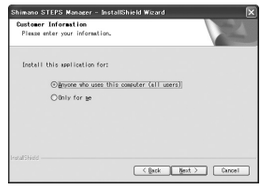



2. Click the [Next] button.



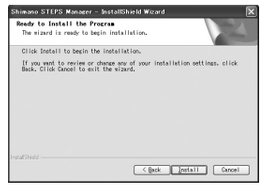

3. If you agree to the terms of the Software License Agreement, click the [Yes] button.

4. If you would like Shimano STEPS Manager to be available for use by all users of the PC, select “Anyone who uses this computer (all users)”. If you would like only the current user of the PC to be able to use the application, select “Only for me”. After making the selection, click the [Next] button.

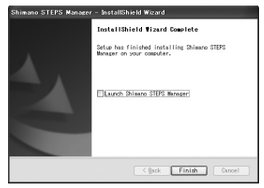



5. Select the installation folder and then click the [Next] button.

6. Installation will begin when you click the [Install] button.

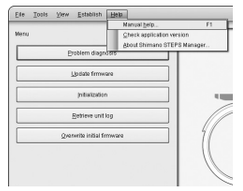



7. When installation is complete, the following window appears. Click the [Finish] button to close the installation wizard. If you select “Launch Shimano STEPS Manager”, Shimano STEPS Manager will be launched when you click the [Finish] button.




### ■ Displaying the manual for Shimano STEPS Manager

After Shimano STEPS Manager is launched, you can select “Manual Help” from the “Help” menu on the menu bar to display the user's manual for Shimano STEPS Manager.




## 3. Connect the SM-PCE1 to the PC

When the PC application is run, a “Connect the SM-PCE1.” message will be displayed, so connect the USB cable of the SM-PCE1 to the PC.

## 4. Install the USB driver

Install the USB driver according to the instructions given in the manual for the PC application (such as Shimano STEPS Manager).

## 5. Connect the SM-PCE1 to the system or unit

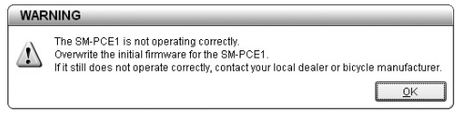
Connect the SM-PCE1 to the system or to a unit according to the instructions given in the manual for the PC application (such as Shimano STEPS Manager).

## Troubleshooting

- If the message “Connect the SM-PCE1.” appears on the PC screen shortly after the SM-PCE1 has been connected to the PC, there may be a problem with the SM-PCE1. (The message window shown below appears when Shimano STEPS Manager is being used.)

If the same problem occurs even after repeatedly disconnecting and reconnecting the USB cable, contact the place of purchase or the nearest bicycle manufacturer in the country of use.

- If the LED on the SM-PCE1 does not illuminate after the PC application has been launched, the firmware may not have been correctly written into the SM-PCE1. In such cases, a message such as the following will appear on the PC screen. (The message window shown below appears when Shimano STEPS Manager is being used.)




Use the load initial firmware function to reload the firmware, and if this does not solve the problem, contact the place of purchase or the nearest bicycle manufacturer in the country of use.

SHIMANO

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**SHIMANO INC.**
3-77 Oimatsu-cho, Sakai-ku, Sakai-shi, Osaka 590-8577, Japan

* Service Instructions in further languages are available at :
**http://techdocs.shimano.com**

Please note: specifications are subject to change for improvement without notice. (English)
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